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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/696,757 | 10/29/2003 | John A. Sollars JR. | 2056B | 6684 |

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| EXAMINER |
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ENGLISH, PETER C

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| ART UNIT | PAPER NUMBER |
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3616

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,757

Applicant(s)

SOLLARS, JOHN A.

Examiner

Peter C. English

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply.

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 10-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20040512</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

25, mentioned at page 12, line 20.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

312, shown in Fig. 8.

412, shown in Fig. 9.

512 and 514, shown in Fig. 10.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the airbag cushion comprising a jacquard construction and having curved joints (claim 24, lines 1-2 and 19-20; and claims 32 and 33) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

4. Corrected drawings are required in reply to the Office action to avoid abandonment of the application. Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. The correction to the drawings will not be held in abeyance.

Specification

5. The specification is objected to because:

At page 7, line 5, "210" should be "110". See Fig. 3A.

At page 16, line 20, "pattern" should be "illustrated in FIG.".

Appropriate correction is required.

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6. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification fails to describe the airbag as having a “non-inflating portion” (claims 23 and 24, line 2).

The specification fails to describe the airbag as having “regions of yarn entanglement” (claim 25, line 10).

The specification fails to describe the airbag as having “second seams [that] form a seam along said joint” (claim 26, lines 1-2).

The specification fails to describe the airbag as having “a total of between about four and about eight first yarns between successive joints for the first/second layer structure” (claim 35, lines 3-4).

Claim Objections

7. Claims 23, 24 and 26-28 are objected to because of the following informalities:
In claims 23 and 24, at line 3, “cushion” should be inserted after “airbag”. See line 1.
In claim 24, at line 14, the second occurrence of “and” should be deleted.
In claim 26, at line 5, “or” should be “and”.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. Claims 10-17, 21, 22 and 24-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 10 and 17, the terms “the weft direction” (lines 4-5), “the warp direction” (line 5) and “said crossover yarns of said first layer” (lines 13-14) lack proper antecedent basis.

In claim 15, at lines 2-3, the term “said successive warp yarns in each of said joints” lacks proper antecedent basis.

Claim 21 is indefinite because it fails to recite a further limitation of the airbag cushion of claim 10. Instead, claim 21 recites a limitation of the method/apparatus for making the cushion.

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In claim 22, at line 2, “essentially independent” is inaccurate since the first and second layers are interconnected by the crossover yarns forming the first and second interconnected joints (see claim 18, lines 7-17).

In claim 24, “in a curved format” (line 19) appears to contradict “running generally parallel and in the first direction” (line 9). Joints running parallel to one another along a single direction cannot be curved.

In claim 24, “in a jacquard weave” (lines 19-20) appears to contradict “in a plain weave” (lines 16-17).

In claim 25, at lines 14-15, “the gas impermeability” lacks proper antecedent basis.

In claim 26 at lines 1-2, “said second yarns form a seam along said joint” is indefinite because a “seam” and a “joint” are synonymous. It is unclear what constitutes a “seam along a joint”.

In claim 26, at line 2, “said second yarns pass successively over and under each transversely oriented first yarn” is inaccurate because the second yarns do not pass over and under each first yarn. Instead, the second yarns pass over and under only those first yarns located in the same layer, as well as those in the opposite layer that make up the woven-in joint.

In claim 26, at lines 2-3, “each transversely oriented first yarn” lacks proper antecedent basis. The first yarns have not been previously defined as “transversely oriented”.

In claim 26, at lines 3-5, “such that the over-under interwoven relationship between said first yarns and said second yarns is maintained across said first and second joints” is inaccurate because the crossover yarns do not maintain the “over-under relationship” since they shift between layers.

In claim 26, “said first layers” (line 5) and “said second layers” (line 6) lack proper antecedent basis.

In claim 31, at line 19, “said second yarns forming a crossover” is indefinite because plural crossovers are formed by plural second yarns. Further, “said second yarn” (line 21) and “said joint” (line 22) are indefinite because plural second yarns and plural joints have been previously recited. The examiner suggests: at line 19, change “a crossover” to “crossovers”; at line 20, change “crossover is” to “crossovers are”; at line 21, change “yarn assumes” to “yarns

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assume”; at line 21, change “crossover” to “crossovers”; and at line 22, change “joint” to “joints”.

In claim 32, “of jacquard construction” (line 2) appears to contradict the previously recited “plain weave pattern” (claim 31, line 21).

In claim 33, “are curved” appears to contradict the previously limitation “extending generally parallel and in said first direction” (claim 31, lines 13-14). Joints running parallel to one another along a single direction cannot be curved.

Claim 34 is indefinite because it introduces a “plurality of joints” without defining the relationship between these plurality of joints and the “first joint” and “second joint” previously recited in claim 31, at line 13.

In claim 35, at line 4, “the first/second layer structure” lacks proper antecedent basis.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 10-12, 14, 15, 18, 19, 22, 25-29, 31, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Buchner et al. (US 3,792,873). As shown in Fig. 3, Buchner et al. discloses an air bag cushion comprising a woven fabric bag 1 having a face portion formed by a first fabric layer 5a, a rear portion formed by a second fabric layer 5b, and woven in joints 6 which define flow barriers between the first and second layers 5a, 5b. As shown in Fig. 4, the first fabric layer 5a is defined by warp yarns 21 and weft yarns 24, and the second fabric layer 5b is defined by warp yarns 22 and weft yarns 25. The fabric layers 5a, 5b are interwoven to form the woven in joints 6 (see column 3, lines 36-55 and column 4, line 65 through column 5, line 14). As shown in Fig. 4, the woven in joints are separated by eight yarns. The fabric layers 5a, 5b are made of polyester or nylon (see column 5, lines 15-17).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 13, 16, 17, 20, 24, 30, 32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchner et al. (US 3,792,873). Buchner et al. lacks joints separated by no more than four yarns. It would have been obvious to one of ordinary skill in the art to reduce the separation of the joints to no more than four yarns in order to reduce the size of the inflatable areas between the joints and minimize the likelihood of joint failure. Further, such a modification involving a mere change in size is generally recognized as being within the level of ordinary skill in the art.

With respect to claim 17, it would have been an obvious matter of design choice to modify Buchner et al. by orienting the joints in the weft direction since applicant has failed to establish any criticality of orienting the joints in this direction and it appears that the joints would work equally well in either the warp or weft directions.

With respect to claims 24 and 32, by applicant's own admission jacquard looms are well-known in the art. It would have been obvious to use a jacquard loom to construct Buchner et al.'s air bag because jacquard looms are well suited to complex shapes and computer-controlled manufacturing.

13. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchner et al. (US 3,792,873) in view of Thornton et al. '125 (US 5,098,125). Buchner et al. lacks a dobby construction. Thornton et al. '125 teaches an air bag cushion having interwoven fabric layers made of polyester or nylon yarn (see column 3, lines 49-50). The fabric layers are interwoven in such a way as to eliminate yarn floats (see column 4, lines 48-68). The cushion is woven on an "electronic or computer-controlled dobby or harness regulator" (see column 5, lines

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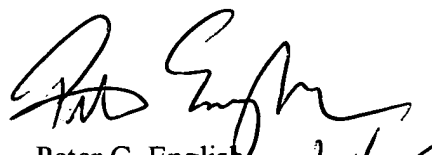
9-12). From this teaching of Thornton et al. '125, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Buchner et al. by providing using a dobby construction because such a construction is less complex and less costly than other woven constructions (e.g., jacquard).

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 703-308-1377. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


Peter C. English
Primary Examiner
Art Unit 3616
3/14/05

pe
March 14, 2005